T5

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/314,927	05/20/1999	TAKASHI KOBAYASHI	35.C13533	5816

5514 7590 12/08/2003

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER	
ODLAND, DAVID E	

ART UNIT	PAPER NUMBER
2662	15

DATE MAILED: 12/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

T5

Office Action Summary	Application No. 09/314,927	Applicant(s) KOBAYASHI ET AL.	
	Examiner David Odland	Art Unit 2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 September 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-7,10,13-15,18 and 30-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-7,10,13-15,18 and 30-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. The following is a response to the amendments filed on 09/29/2003.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1,4,5,10,18,30,31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al. (USPN 5,504,757), hereafter referred to as Cook, in view of EP 0697778 to Keshav et al., hereafter referred to as Keshav.

Referring to claims 1 and 18, Cook discloses a communication apparatus (a communication apparatus (see figure 1B)) comprising:

a) a communication unit having different transfer rates (a serial bus of the apparatus is capable of operating at multiple speeds (see figure 1B and abstract)), an isochronous transfer mode and an asynchronous transfer mode (the apparatus operating in both the asynchronous transfer mode and isochronous transfer mode (see abstract)) and adapted to transmit a predetermined packet to destinations by the asynchronous transfer mode using at least one of the different transfer rates (the method transmits packets to nodes using one of at least three speeds (see column 1 lines 42 through 57 and abstract)); and

b) a control unit adapted to determine a maximum transfer rate between the apparatus and the destinations (the maximum rate between the nodes is determined (see column 7 line 34 through column 8 line 50 and figure 3)).

Cook does not disclose that the apparatus receives responses for the destinations or that the determination is made based on the response transmitted from each of the destinations. However, Keshav discloses a transmission rate adjustment system wherein a target rate is adjusted base on the acknowledgements received from the destination nodes (see column 7 lines 34-43, figure 5 and claims 1-3)). It would have been obvious to one skilled in the art at the time of the invention to implement this feature in the Cook system because doing so would allow the system to verify which nodes are available (by-way-of the acknowledgements) before transmission takes place, thus making Cook more reliable.

Referring to claims 4 and 30, Cook discloses the system discussed above. Cook does not disclose that if the response is absent, retransmitting the packet at the previous rate. However, Keshav discloses of a communication unit that retransmits a predetermined packet at a transfer rate lower than the previous transfer rate, if at least one response is absent (an acknowledgment is not received the packet is retransmitted at a decreased set point rate (see column 8 lines 1-22) (see column 10)). It would have been obvious to one skilled in the art at the time of the invention to implement this feature into the Cook system because if the acknowledgment is not received than that would indicate that there are problems with the transmission to the destination such as the destination being congested or unavailable. Therefore, retransmitting the packet a lesser rate will help prevent further congestion of the destination node or any intervening nodes along the path to the destination, thereby making Cook more reliable.

Referring to claims 5 and 31, Cook discloses the system discussed above. Furthermore, Cook discloses that the communication unit transmits data to the destinations at the maximum transfer rate after discriminating the maximum transfer rate (when the maximum rate is determined, that rate is used to transmit the data (see column 7 lines 24-50)).

Referring to claims 10 and 34, Cook discloses the system discussed above. Furthermore, Cook discloses that the communication unit conforms to an IEEE 1394 standard (the apparatus uses the IEEE 1394 standard (see abstract)).

4. Claims 6 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook in view of Keshav and further in view of Pflaumer (USPN 4,884,266), hereafter referred to as Pflaumer.

Referring to claims 6 and 32, Cook discloses the system discussed above. Furthermore, Cook discloses that the communication unit packetizes data into at least one packet (the apparatus communicates using data packets (see abstract)). Cook does not disclose that the system broadcasts each packet to the destinations. However, Pflaumer discloses a system wherein data packets are broadcast to destination nodes (see column 6)). Since the packets are broadcast, there is no need for determining which of the destination nodes is to receive the packet (i.e. they will all receive the packet) and therefore there is less processing time needed. It would have been obvious to one skilled in the art at the time of the invention to implement this feature in Cook because doing so would allow Cook to operate faster.

5. Claims 7 and 33 rejected under 35 U.S.C. 103(a) as being unpatentable over Cook in view of Keshav and further in view of Sheller et al. (USPN 5,010,553), hereafter referred to as Sheller.

Referring to claims 7 and 33, Cook discloses the system discussed above. Cook does not disclose that the maximum rate is used to determine the amount of data in the packets, which can vary based on the maximum rate. However, Sheller discloses a system wherein the size of variable size packets is determined based on a data rate (see column 3)). It would have been obvious to one skilled in the art at the time of the invention to have the packet size vary depending on the determined maximum transfer rate since higher rates will allow bigger packets to be transmitted and lower rates will allow only smaller packets to be transmitted. Therefore, adjusting the packet since according to the transfer rate will make the system of Cook operate more efficiently and adaptive to the maximum speed it determines.

6. Claims 13, 14, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook in view of Keshav and further in view of Terada et al. (USPN 6,167,046), hereafter referred to as Terada.

Referring to claims 13, 14, 35 and 36 cook discloses the system discussed above. Cook does not disclose that the predetermined packet includes a command that inquires of an ability of the destinations or information about an ability of the apparatus. However, Terada discloses a communication system wherein ability inquiries, in the form of packets, are made and stored between the nodes of the network (see column 3 lines 10-16)). It would have been obvious to one skilled in the art at the time of the invention to include such information in messages

communicated between the source and destination nodes of Cook, for many reasons. One such reason would be that knowing each other's abilities would allow more versatile communication to take place. Namely, knowing that each can properly receive and process real-time data will allow such data to be communicated between the source and the destination. Another reason would be to determine if the source and destination could perform certain types of error correction. All of which would make the system of Cook more robust and reliable.

7. Claims 15 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook, in view of Watanabe et al. (USPN 6,246,665), hereafter referred to as Watanabe.

Referring to claims 15 and 37, Cook discloses the system discussed above. Cook does not disclose that the predetermined packet includes a connection ID that indicates a logical connection relationship between the apparatus and the destinations. However, Watanabe discloses a system wherein logical connection IDs are used (see figures 33 and 34)). It would have been obvious to one skilled in the art at the time of the invention to include logical connection ID's in the system of Cook, because doing so would allow the destination to know how and where to locate the source (and vice versa) and thus properly send the packets back and forth between them, thereby making Cook more reliable.

Response to Arguments

8. Applicant's arguments with respect to claim 1,4-7,10,13-15,18 and 30-37 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Odland, who can be reached at (703) 305-3231 on Monday – Friday during the hours of 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached at (703) 305-4744. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist, who can be reached at (703) 305-4750.

deo

December 1, 2003

HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600